



THE WORLD BANK

LAGOS STATE GOVERNMENT MINISTRY OF AGRICULTURE

AGRO-PROCESSING, PRODUCTIVITY ENHANCEMENT
AND LIVELIHOOD IMPROVEMENT SUPPORT PROJECT

SUCCESS STORY: HOW THE INTRODUCTION OF NIPPLE DRINKER AND PELLETIZED FEED TECHNOLOGY IN DEEP LITTER SYSTEM INCREASED POULTRY FARMERS' PRODUCTIVITY AND BROILER PRODUCTION IN LAGOS STATE.

Value Chain: Poultry

Stakeholders: Poultry Farmers

State: Lagos State

Target Audience: Poultry Farmers, Investors.

Keywords: Broiler, Chicken,
Pelletised feed,
Nipple drinker, Deep litter,
Cages, Investors.

Authors & Contact information:

Oluranti Sagoe-Oviebo
(State Project Coordinator),
rovieboo@gmail.com
Folake Ogunlana-Lawal (Communication Officer)
folakeogunlana@gmail.com,
Balogun Idris (Productivity Enhancement
Specialist) lanrebalogun@yahoo.com,
Olusola Johnson (Facilitator, Poultry Value
Chain) oo_johnson01@yahoo.com

Pictures: Wasiu Abiodun
adekunleabiodun@live.com



Executive Summary

This document captures the success story of enhanced productivity recorded by supported beneficiaries in broiler production in Lagos State.

The focus of this success story is one of the beneficiaries, Mr. Falade Olaoluwa of God's Own Commercial CAMS, Igbodu, Epe, Lagos.

Broiler production in Lagos State has been identified as one of the lucrative agricultural businesses thriving in the State. This is due mainly to the opportunities it offers entrepreneurs in completing a cycle and making profit within a short period of time, usually an average of six (6) weeks per cycle and the comparative advantage of consumer population/customers in the State.

Context and Challenges

The challenges faced by Mr Falade Olaoluwa and a host of other broiler farmers in Lagos State before the intervention of nipple drinker and pelletised feed by Lagos APPEALS Project were high cost of feed, feed wastage, low weight gain, long production cycle, high mortality due to consistent disease outbreak, high labour cost amongst others.

The average weight attained by Mr Falade Olaoluwa at six weeks before the intervention of the Nipple drinker and pelletised feed in deep litter system by Lagos APPEALS project was 1.9kg.



Water drinker in a broiler deep litter system



THE WORLD BANK

LAGOS STATE GOVERNMENT MINISTRY OF AGRICULTURE

AGRO-PROCESSING, PRODUCTIVITY ENHANCEMENT AND LIVELIHOOD IMPROVEMENT SUPPORT PROJECT



Broiler production in conventional deep litter system



Broiler production in deep litter system with a nipple drinker and pelletised feed

Action, Steps and Solutions

The Agro-Processing, Productivity Enhancement and Livelihood Improvement Support (APPEALS) Project in Lagos State has impacted farmers positively by enhancing their productivity and improving the livelihood of millions of people directly and indirectly. This has impacted the lives of poultry farmers in the State positively.

Needs assessment for broiler farmers in the State were carried out and the challenges being faced by the farmers were recorded. One major challenge faced by the industry is high cost of feed, which accounts for about 70 percent of the cost of production. The prices continue to rise making it difficult for smallholder farmers to access quality feed for their birds.



Day Old Chicks feeding on pelletised feed

The usual practice is for farmers to place open water trough amongst the flock in the deep litter system for water source and use mash feed which allows wastage due to separation of grains (coarse particles) from other ingredients and supplements. Two technologies were identified to solve these challenges of water and feed provision for broiler birds in deep litter system. The technologies are the use of nipple drinker to provide water and pelletised feed in broiler production. The pelletised feeds are compounded and moulded into pellets such that all ingredients are available in each pellet consumed.

This invariably decreases feed wastage, reduces selective feeding and decreases ingredient segregation. It also allows for thermal modification of starch and protein, improves palatability, destroys pathogenic organisms and provides for less time and energy expended for eating by the birds. The nipple drinker consists of a pressure regulated central water supply line with rising system. This can be for a line length of up to 120m with intermittent placement of nipple with or without cup at measured intervals along the whole length of the line where birds can drink water. Each nipple is capable of serving four to five birds in the pen. As the birds need water, they will peck at the nipple and a drop of water is released. The birds are able to drink water ad-libitum.



THE WORLD BANK

LAGOS STATE GOVERNMENT MINISTRY OF AGRICULTURE

AGRO-PROCESSING, PRODUCTIVITY ENHANCEMENT
AND LIVELIHOOD IMPROVEMENT SUPPORT PROJECT

As against the traditional method of placement of open trough water in the deep litter system which pour water all over the litter when bumped or jostled by the birds or even human activities, the nipple drinker prevents the shavings from getting wet which reduces the incidence of disease outbreak especially Coccidiosis, respiratory illness, diarrhoea and footpad dermatitis. It eases the administration of oral medication and vaccination and makes available more floor space. All of these makes the management of poultry pen and birds easier and eliminates drudgery and reduces the time needed for watering of flock

These innovations were introduced by Lagos APPEALS project to farmers through Technology Demonstration. The demonstration, which ran for six (6) weeks was carried out on a poultry farm – Creative Farms, Gberigbe, Ikorodu. The project supported with Day Old Chicks (DOCs), pelletised feed and water using the nipple drinker system. The birds were raised on the farm for six (6) weeks with the involvement of farmers across the zone while the Creative farm continued the use of conventional method of rearing in their other pens. A field day was conducted after the sixth week comparing the production in the introduced technology system to the conventional system of rearing by the farmers. The technology was adopted by Mr Falade and other farmers.

Results

After about six weeks of broiler production using the nipple drinker and pelletised feed technology, Mr Falade observed a great improvement in the sizes of broiler on the farm. The average weight of the birds was 2.5kg / 6weeks compared to an average weight of 1.9kg / 6weeks for conventional method of broiler rearing in deep litter system.

It was a success story of performance because of the recorded increased weight gain, reduced overhead cost of production and low mortality experienced. The technology promotes better hygiene, quality feed, reduced wastage, decreased ingredient segregation and decreased opportunities for selective feeding. Other advantages are; increased feed intake and weight gain

Lessons Learned

The successful adoption of the nipple drinker and pelletised feed in deep litter broiler production system as against the use of mash feed and open water trough by farmers through technology intervention from Lagos APPEALS project has enhanced farmers productivity and the intervention's impact cannot be over emphasised. This has presented several other lessons that benefited other poultry farmers in the State. The key lessons learned are as follows;

- The Nipple drinker and pelletized feed technology increases growth rate
- It reduced the cost of production
- It reduces the time of rearing
- Feed wastage is decreased as a result of the technology
- Selective feeding by the birds is reduced
- Less time and energy are expended by the birds during feeding
- There is reduced incidence of disease outbreak as a result of the technology
- It helps to reduce mortality rate



THE WORLD BANK

LAGOS STATE GOVERNMENT MINISTRY OF AGRICULTURE

AGRO-PROCESSING, PRODUCTIVITY ENHANCEMENT
AND LIVELIHOOD IMPROVEMENT SUPPORT PROJECT

- It is easy to install and maintain
- It is highly cost effective
- Less money is expended on disease treatment
- Thermal modification of starch and protein components of the feed is possible
- Feed palatability is improved
- Administration of oral medication and vaccination is easier
- Drudgery in management is reduced significantly
- It creates more floor space to accommodate more birds.
- It encourages more weight gain in birds
- It reduces labour cost / cost of production/

Recommendations

- More investors and farmers should be encouraged to embrace the technology due to its cost effectiveness.
- Broiler farmers should be encouraged to increase their stock because the flock management is easier with the introduction of these intervention which will give increased profitability.
- Feed millers should be encouraged to produce more of high-quality pelletised feed for broiler production.
- The use of open water trough should be totally discouraged.
- Record keeping of all activities in broiler production should be kept by farmers.
- Group dynamics and cooperative societies amongst broiler farmers should be encouraged.

Resources and Reference Materials

- Lagos State Agro-Processing, Productivity Enhancement and Livelihood Improvement Support (APPEALS) Project
- Mr. Falade Olaoluwa, a Broiler farmer in Igboodu, Epe, Lagos State.

FOR MORE ENQUIRIES CONTACT

Lagos APPEALS Project

Lagos State APPEALS Project Coordinating Office, LSADA Complex, Oko-Oba Agege, Lagos.

Lagos APPEALS Project Hotlines: 08143838656, 09090496110

Toll-Free Lines: 080 0080 0088, 080 0080 0089 **E-mail:** info@lagosappeals.ng

Facebook: Lagos APPEALS **Instagram:** Lagos APPEALS Project

Twitter:@LagosAPPEALS

Website: www.lagosappeals.ng